

Report to the Twenty-first Legislature

Regular Session of 2001

Prepared by:

The Natural Energy Laboratory of Hawaii Authority (NELHA)

State of Hawaii

In response to:

Senate Concurrent Resolution 19 - 2001

Requesting the Natural Energy Laboratory of Hawaii Authority to revive its proposal for the reactivation of the Noi'I O Puna Research Center

December 2001

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Background

The Natural Energy Laboratory of Hawaii Authority and its predecessor, the Natural Energy Laboratory of Hawaii, have had responsibility for the Puna Geothermal Facility near Pohoiki since 1986. At that time, the ad hoc committee that had developed the well beginning in 1976 transferred control of the HGP-A geothermal well and the surrounding lands to NELH. Facilities, in addition to the geothermal well, included a Hawaii-County-sponsored visitor center, a research facility, and geothermal power generation buildings and equipment.

The geothermal generator attached to the HGP-A well began producing up to 3 MW of power in 1981. This power was sold by HELCO under an agreement with the Research Corporation of the University of Hawaii, which managed the facility, initially for the ad hoc committee and later for NELH. The Community Geothermal Technology Program (CGTP) established at the HGP-A site in 1986 by the State Department of Business and Economic Development and the Hawaii Natural Energy Institute, distributed small grants (up to \$10,000) to small businesses for development of innovative uses of the geothermal fluids and heat. The CGTP grants were funded by the U.S. Department of Energy, the County of Hawaii and a number of private donors. This program was viewed positively by a large part of the community – many of whom opposed to geothermal energy development.

In 1989, the NELHA Board of Directors determined that the power generation equipment required more maintenance than was feasible, so the generator was shut down and the well quenched with cold water. Without flow from the well, there was no source of geothermal heat, so the CGTP also had to be terminated. Some experimental programs were conducted in the well between 1992 and 1996. NELHA eventually plugged and abandoned the HGP-A well in 1999. Though Mayor Yamashiro had indicated strong interest in obtaining the site for County use, the County administration took no action after the required Plugging and Abandonment had been completed. The site has been unused except for minor storage since 1996.

Current Status

The Natural Energy Laboratory of Hawaii Authority, an agency of the State of Hawaii, has accepted a proposal to operate Ne Noi'I O Puna geothermal research facility.

NELHA received two responses to its request for proposals to sublease the property and operate the research center. The NELHA Board of Directors is pleased to announce that they have accepted the proposal submitted by Puna Geothermal Venture (PGV) to continue existing activities and develop new operations on the property.

PGV will refurbish and expand the visitor center at the site and will also make reasonable efforts to solicit proposals from the public for the development, construction, operation and maintenance of a geothermal heat source on the property. If PGV receives a bonafide proposal, they will make available, for reasonable compensation, facilities to transfer surplus heat from their neighboring geothermal facility and area within the Noi'I O Puna facility for geothermal related businesses of local entrepreneurs. They have no plans for further geothermal drilling on the property.

This action of the NELHA Board conforms with the recommendations of SCR No. 19, adopted by the 2001 State Legislature. The Board concludes that the PGV proposal represents the best available opportunity for site utilization, presenting minimal environmental and cultural impact while providing significant benefits to the community and financial return to the State.

Report Title:

Noi'i o Puna Research Center

THE SENATE

TWENTY-FIRST LEGISLATURE,
2001

STATE OF HAWAII

S.C.R.
NO.

19

SENATE CONCURRENT

RESOLUTION

Requesting the Natural Energy laboratory of hawaii authority to revive its proposal for the REACTIVATION of the Noi`i o puna research center.

WHEREAS, geothermal energy has proven to be a viable energy resource, providing approximately thirty per cent of the power for the county of Hawaii; and

WHEREAS, in 1982, the Hawaii Geothermal Project's generation plant and its experimental geothermal well in Puna were successfully producing electricity; and

WHEREAS, the Noi`i o Puna, or Puna Geothermal Research Center, a joint effort between the State of Hawaii and the United States Department of Energy, was built in 1984 for research, demonstration, and commercialization projects that utilize the hot steam available from the Hawaii Geothermal Project's adjacent geothermal wells; and

WHEREAS, the Community Geothermal Technology Program, with participants from the Hawaii Natural Energy Institute of the University of Hawaii, and the then Department of Business, Economic Development, was formed in 1985 as a public laboratory at Noi`i o Puna to encourage the use of direct heat and byproducts from the Hawaii Geothermal Project's geothermal well and to support Puna District small businesses; and

WHEREAS, from 1984 through 1989, the Community Geothermal Technology Program awarded funds to grantees whose projects included glass production, cloth dyeing, fruit product processing, lumber drying, and greenhouse bottom heating; and

WHEREAS, although the Community Geothermal Technology Program received widespread community approval, its projects were terminated in 1989 and the Noi`i o Puna facility has been underused or even idle because there was no available heat for direct heat projects after the Hawaii Geothermal Project's plant and well were shut down in December 1989; and

WHEREAS, with the cooperation and support of neighboring commercial geothermal producer, Puna Geothermal Venture, Noi`i o Puna now can develop a system to produce hot potable water for new direct heat projects that will allow the reactivation of Community Geothermal Technology Program; now, therefore,

BE IT RESOLVED by the Senate of the Twenty-first Legislature of the State of Hawaii, Regular Session of 2001, the House of Representatives concurring, that the Natural Energy Laboratory of Hawaii Authority is requested to revive and update their 1992 Reactivation of the Noi`i o Puna Research Center proposal which includes the installation of a heat exchanger and pipeline to generate waste heat from geothermal reinjection fluids at the Puna Geothermal Venture facility, improvement of the Noi`i o Puna facilities to accommodate expanded Community Geothermal Technology Program operations, and the establishment of direct heat geothermal projects by the community to be conducted under the Community Geothermal Technology Program at Noi`i o Puna; and

BE IT FURTHER RESOLVED that the Natural Energy Laboratory of Hawaii Authority is requested to report the status of its Reactivation of the Noi`i o Puna Research Center to the Legislature twenty days before the convening of the Regular Session of 2002; and

BE IT FURTHER RESOLVED that certified copies of this Concurrent Resolution be transmitted to Director of the Department of Business, Economic Development, and Tourism; the Executive Director of the Natural Energy Laboratory of Hawaii Authority; the Hawaii Natural Energy Institute of the University of Hawaii; the Hawaii Institute of Geophysics; and Puna Geothermal Venture.

OFFERED _____